PRINCO DDR3-1800 user guide and testing for ASRock-P55M Motherboard

CPU i7-875 2.93G



Part I: Standard test

It's the easiest way to enjoy overclock benefit by

using PRINCO DDR3-1800 DIMM board

How to use?

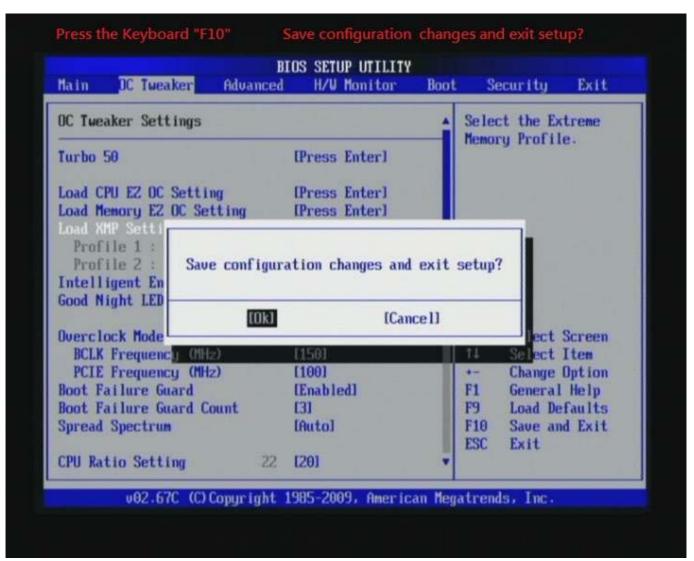
- 0. Clear BIOS to mainboard initial setting
- 1. Enter BIOS setup and [OC Tweaker] menu

ilain OC Tueake	r Advanced H/V Monitor	Boot S	ecurity Exit
System Overview			(ENTER), [TAB] SHIFT-TAB] to
System Time System Date	[22:41:52] [Sat_09/18/2010]		ct a field.
ogsten bate	1341 05/10/2010	Use	[+] or [-] to
BIOS Version :	P55 Pro/USB3 P1.20	conf	igure system Time.
Processor Type :	Intel(R) Core(TM) 17 CPU		San de la Service de la composition de
	K 875 @ 2.93GHz (64bit)		
Processor Speed :			
Microcode Update:			
Cache Size :	8192KB		
Total Memory :	4096MB		Select Screen
	Dual-Channel Memory Mode	11	Select Item
DDR3_A2 :	None		Change Field
	2048M8/667MHz DDR3_1333	Tab	Select Field
and the second se	None	F1	General Help
DDR3_B1 :	2048MB/667MHz DDR3_1333	F9	Load Defaults
		F10	Save and Exit
		ESC	Exit

- 2. Enter [Load XMP Setting] item and choose X.M.P option BIOS will load X.M.P parameter in SPD on DIMM board , which are performance optimized for PRINCO DDR3-1800 DIMM board
- 3. Enter [Load XMP Setting] item and select [Profile 2]

Main <mark>DC Tweaker</mark> Advanc	BIOS SETUP UTILITY ed H/W Monitor	Boot	Security Exit
OC Tweaker Settings		A	Select the Extreme
Turbo 50	[Press Enter]		Memory Profile.
Load CPU EZ OC Setting	[Press Enter]		
Load Memory EZ OC Setting	[Press Enter]		
Load XMP Setting	(Profile 2)		
Profile 1 : DDR3 1600 7-9- Profile 2 : DDR3 1800 8-9-	7-24 1.60U		
Intelligent Energy Saver	[Disabled]		
Good Night LED	[Disabled]		
Overclock Mode	[Manua1]	- 1	++ Select Screen
BCLK Frequency (MHz)	[150]		14 Select Item
PCIE Frequency (MHz)	[100]		+- Change Option
Boot Failure Guard	[Enabled]		F1 General Help
Boot Failure Guard Count	[3]		F9 Load Defaults
Spread Spectrum	[Auto]		F10 Save and Exit ESC Exit
CPU Ratio Setting 2	2 [20]		LOC LAIL

4. Save BIOS changes [F10] and exit



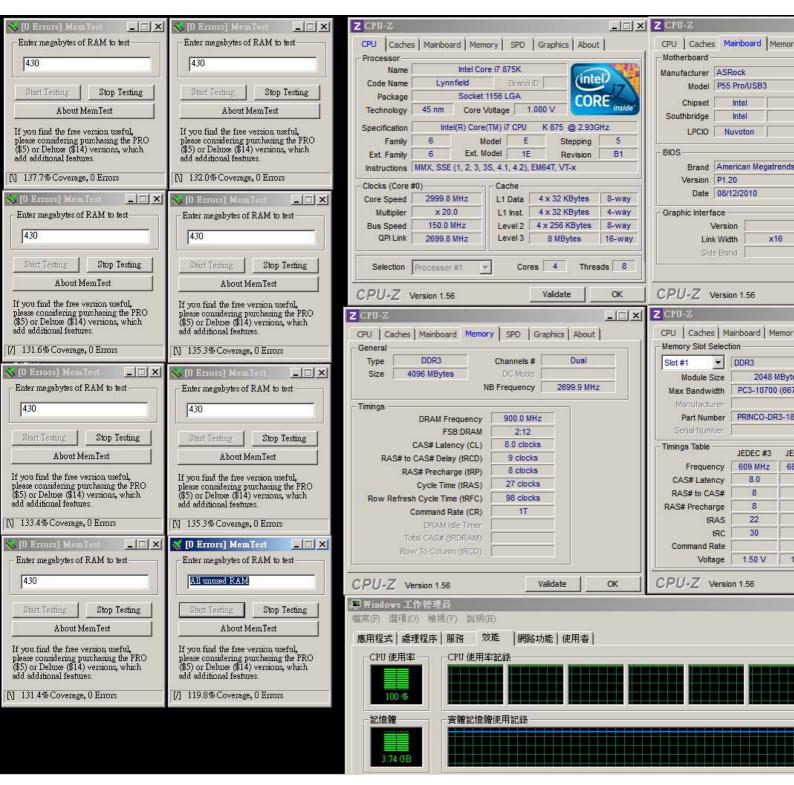
5. Enter BIOS setup and [Main] menu

<mark>ilain</mark> OC Tueake	BIOS SETUP UTILITY r Advanced H/W Monitor	Boot	Security Exit
System Overview			Use [ENTER], [TAB] or [SHIFT-TAB] to
System Time System Date	[01:10:24] [Thu 08/12/2010]		select a field.
	P55 Pro/USB3 P1.20 Intel(R) Core(TM) i7 CPU K 875 @ 2.936Hz (64bit)		configure system Time.
Processor Speed : Microcode Update: Cache Size :	2998MHz 106E5/3		
	4096MB Dual-Channel Memory Mode None		 ↔ Select Screen ↑↓ Select Item ← Change Field
DDR3_A1 : DDR3_B2 :	2048M8/900MHz DDR3_1800 None 2048M8/900MHz DDR3_1800		TabSelect FieldF1General HelpF9Load Defaults
			F10 Save and Exit ESC Exit

Test result?

In order to demonstrate the performance and stability of PRINCO DDR3-1800 DIMM board, We use the strictest stress testing, that is, multi-core MemTest in window 7.

(Data rate: 900.0*2=1800, timing: 8, 9, 8, 27, multi-core test => pass!)



Advanced Overclocking and Testing

Part II: Heavy test

If you want to know the potential of PRINCO

DDR3-1800? Following are step-by-step howto.

How to use?

- 0. Clear BIOS to mainboard initial setting
- 1. Enter BIOS setup and [OC Tweaker] menu

lain OC Tuea	BIOS SETUP UTILITY ker Advanced H/W Monitor	Boot	Secur i ty	Exit
System Overview			Use [ENTER] ,	
System Time System Date	[22:41:52] [Sat_09/18/2010]		or ISHIFT-TAB select a fiel	
ogottin Parto			Use [+] or [-	l to
BIOS Version	: P55 Pro/USB3 P1.20		configure sys	tem Time.
Processor Type	: Intel(R) Core(TM) 17 CPU			
	K 875 @ 2.936Hz (64bit)			
Processor Speed				
Microcode Updat Cache Size				
caune alze	· 0132KB			
Total Memory	: 4096MB		↔ Select	Screen
	Dual-Channel Memory Mode		14 Select	Iten
DDR3_A2	: None		+- Change	
DDR3_A1	: 2048MB/667MHz DDR3_1333		Tab Select	
DDR3_B2	: None	125	F1 General	
DDR3_B1	: 2048MB/667MHz DDR3_1333		F9 Load De	
			F10 Save an ESC Exit	d Exit
			LSC EXIT	

- 2. Enter [Overclock Mode] item and select Manual
- 3. Select [BLCK Frequency] item , and increase to higher Base clock rate (ex:164). Then select [DRAM Frequency] item , and set the DDR3 memory to higher clock rate (ex:DDR3-1968). Don't forget setting [CPU Ratio Setting] item to suitable ratio [ex:17]

(In this case we only focus on memory over clocking, not CPU)

4. Select [DRAM Voltage] item , and set the value to [1.643V].

tep 1 : Overclock Mode tep 2 : BCLK Frequency (MHz)		Set [Set [Manual]	
Step 2 : BCLK Frequency (MH2)				
		Set [17]		
Step 4 : DRAM Frequency			984MHz DDR3_1968]	
Step 5 : DRAM Voltage		set [1.643V]	
Main IC Tweaker Advanced	BIOS SETUP UTILITY H/W Monitor	Boo	t Security Exit	
	2.0010 20020 000			
Good Night LED	[Disabled]	1	Standard = 1.6150	
Overclock Mode	[Manual] Step 1		Max = 2.0080	
BCLK Frequency (MHz)	[164] Step 2			
PCIE Frequency (MHz)	[100]			
Boot Failure Guard	[Enabled]			
Boot Failure Guard Count	[3]			
Spread Spectrum	[Auto]		System may be damaged or reduce its life	
CPU Ratio Setting 17	[17] Step 3		cycle when	
QPI Frequency 5.9046T	[Auto]		overvoltage.	
DRAM Frequency DDR3_1968	[984MHz DDR3_1968	3]	and the second of the	
► DRAM Timing Control	Step 4		↔ Select Screen 14 Select Item	
P DRAN TININg CONCION			+- Change Option	
ASRock UDroop Control	[With VDroop]		F1 General Help	
CPU Voltage	[Auto]		F9 Load Defaults	
DRAM Voltage 1.6430	[1.6430] Step 5		F10 Save and Exit	
UTT Voltage 1.3090	[Auto]		ESC Exit	
PCH Voltage 1.0790	[Auto]			

5. Enter [DRAM Timing Control] item

Main	OC Tweaker	Advanced	IOS SETUP UTILITY H/W Monitor	Boot	e Sec	urity	Exit
Good N	light LED		[Disabled]			AM Timi	ng
fluerc]	lock Mode		[Manual]		Contro	10	
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Frequency (MH	2)	[164]	100			
	E Frequency (MH		[100]				
	ailure Guard		[Enabled]				
Boot F	ailure Guard C	ount	[3]				
Spread	I Spectrum		[Auto]				
CPU Ra	tio Setting	17	[17]				
QPI Fr	requency	5.904GT	[Auto]				
DRAM F	requency	DDR3_1968	[984MHz DDR3_1968				
					**	Select 3	1200 C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
> DRAF	1 Timing Contro	11			11	Select	
A00-1	UDamas Cautan	a.	DISAL III.		Enter F1	and the second second	ub Screen
	VDroop Contro	u.	[With VDroop] [Auto]		F1 F9	General Load De	
	oltage Voltage	1.6430	[1.6430]	- 11	F10	Save an	
	oltage	1.3090	[Auto]	100	ESC	Exit	LAIU
	oltage	1.0790	[Auto]		100	ANGL C	
FCH VE	Traye	T-0130	mator				

6. set [DRAM tCL] item to [8]

set [DRAM tRCD] item to [9]

set [DRAM tRP] item to [8]

set [DRAM tRAS] item to [27]

set [DRAM Command Rate] item to [1]

DRAM tRAS Set [27] Step 2: DRAM Command Rate Set [1] Chipset Settings Chipset Settings DC Tweaker Specifies the DRAM Timing Control Specifies the DRAM tCL 7 181 DRAM tRD 9 191 Step 1 DRAM tRP 7 181 Step 1 DRAM tRP 4 Flattol +* DRAM tRD 5 Flattol +* DRAM tRP 4 Flattol +* DRAM tRP 4 Flattol +* DRAM tRP 4 Flattol +* DRAM tRP 6 Flattol +* Change Option DRAM tRTP 4 Flattol Flatten	DRAM tRCD DRAM tRP				t [9] t [8]	
Set [1] Set [1] Chipset Settings Specifies the DRAM Timing Control Specifies the DRAM tCL 7 [8] DRAM tCD 9 [9] DRAM tRCD 9 [9] DRAM tRP 7 [8] DRAM tRCD 9 [9] DRAM tRP 7 [8] DRAM tRP 8 [Auto] DRAM tWR 12 [Auto] DRAM tRP 4 [Auto] DRAM tRP 4 [Auto] DRAM tRTP 4 [Auto] DRAM tRTP 4 [Auto] DRAM tWL 8 [Auto] DRAM tWL <						
DC Tweaker Specifies the Command/Address rate DRAM Timing Control 7 [8] DRAM tCL 7 [8] DRAM tRCD 9 [9] DRAM tRCD 9 [9] DRAM tRCD 9 [9] DRAM tRAS 24 [27] DRAM tRAS 24 [27] DRAM tWR 12 [Auto] DRAM tWR 12 [Auto] DRAM tRD 5 [Auto] DRAM tRTP 4 [Auto] DRAM tWL 8 [Auto] DRAM tWL 8 [Auto] DRAM tWL 8 [Auto] DRAM tWL 8 [Auto] DRAM tWL 9 [Auto] DRAM tWL 8 [Auto] DRAM tWL 9 [Auto] </th <th></th> <th>and Bata</th> <th></th> <th></th> <th></th> <th></th>		and Bata				
DRAM Timing Control Specifies the Command/Address rate DRAM tCL 7 181 DRAM tRCD 9 191 Step 1 DRAM tRCD 9 191 Step 1 DRAM tRCD 9 191 Step 1 DRAM tRP 7 181 Step 1 DRAM tRP 8 IAutol Step 1 DRAM tWR 12 IAutol Step 1 DRAM tRP 4 IAutol Step 1 DRAM tRTP 4 IAutol Step 1 DRAM CHA RTIL 42 IAutol Stelect Screen DRAM tWL 8 IAutol Stelect Item DRAM tWL 8 IAutol Stelect Item DRAM tWL 8 IAutol F1 General Help DRAM RtWr Disabled </th <th>Rep 23 DRAW Comm</th> <th></th> <th>Chinset</th> <th></th> <th>r [T]</th> <th></th>	Rep 23 DRAW Comm		Chinset		r [T]	
DRAM tCL 7 [8] Step 1 DRAM 12 9 9] 9] Step 1 DRAM tRCD 9 19] Step 1 Command/Address rate DRAM tRCD 9 19] Step 1 Command/Address rate DRAM tRP 7 18] Step 1 Command/Address rate DRAM tRP 7 18] Step 1 Command/Address rate DRAM tRAS 24 127] Intro Intro DRAM tWR 12 Intro Intro DRAM tWR 12 Intro Intro DRAM tWTR 6 Intro Intro DRAM tRND 5 Intro Intro DRAM tRTL 42 Intro Intro Intro DRAM tHI 8 Intro Intro Intro Intro DRAM tHI 8 Intro Intro Intro Intro Intro DRAM tHI 8 Intro	DC Tweaker		chillione.	occerngo		
DRAMtCL7[8]DRAMtRCD9[9]DRAMtRP7DRAMtRP7DRAMtRAS24DRAMtRAS24DRAMtRRC88DRAMtWRDRAM12DRAMtWRDRAMtWRDRAM5IAutolDRAMTRP4IAutolDRAM24DRAMtRIP4IAutolDRAMCHADRAM44DRAM44DRAM11Select ScreenDRAMTISelect ItemDRAM60IAutolF1General HelpDRAMRttWrDisabledIAutolDRAMSlowIAutolF10Save and ExitDRAMB2BCASDelayDisabledIAutolESCExit	DRAM Timing Control					
DRAMtRCD9[9]Step 1DRAMtRP7[8]DRAMtRAS24[27]DRAMtRFC68[Auto]DRAMtWR12[Auto]DRAMtWR12[Auto]DRAMtWR5[Auto]DRAMtRTP4[Auto]DRAMtFAW24[Auto]DRAMtFAW24[Auto]DRAMtFAW24[Auto]DRAMCHARTL42DRAMCHBRTL43DRAMCHBRTL43DRAMKtNom60[Auto]DRAMRttNom60[Auto]DRAMRttWrDisabled[Auto]DRAMSlow[Auto]F10Save and ExitDRAMB2BCASDelayDisabled[Auto]ESCEXItDisabled[Auto]	DRAM tCL	7	[8]	1	- Comma	md/Address rate.
DRAMtRAS24[27]DRAMtRFC88[Auto]DRAMtWR12[Auto]DRAMtWTR6[Auto]DRAMtWTR5[Auto]DRAMtRTP4[Auto]DRAMtFAW24[Auto]DRAMtFAW24[Auto]DRAMCHARTL42DRAMCHBRTL43IAuto]t1Select ScreenDRAMCHBRTL43DRAMKULB[Auto]DRAMtWLB[Auto]DRAMRttWnDisabled[Auto]DRAMRttWrDisabled[Auto]DRAMB2BCASDelayDisabled[Auto]F10Save and ExitESCDRAMB2BCASDelayDisabled[Auto]	DRAM tRCD	9		Step 1		
DRAM tRFC 88 [Auto] DRAM tWR 12 [Auto] DRAM tWR 6 [Auto] DRAM tWTR 6 [Auto] DRAM tRD 5 [Auto] DRAM tRTP 4 [Auto] DRAM tFAW 24 [Auto] DRAM CHA RTL 42 [Auto] ↔ Select Screen DRAM CHB RTL 43 [Auto] 14 Select Item DRAM tWL 8 [Auto] +- Change Option DRAM tWL 8 [Auto] F1 General Help DRAM RttWr Disabled [Auto] F1 General Help DRAM RttWr Disabled [Auto] F10 Save and Exit DRAM B2B CAS Delay Disabled [Auto] ESC Exit	DRAM tRP	7	[8]			
DRAMtWR12[Auto]DRAMtWTR6[Auto]DRAMtRRD5[Auto]DRAMtRTP4[Auto]DRAMtFAW24[Auto]DRAMtFAW24[Auto]DRAMCHARTL42DRAMCHBRTL43DRAMCHBRTL43DRAMCHBRTL8DRAMtWL8DRAMtWL8DRAMRttNom60DRAMRttWrDisabledDRAMRttWrDisabledDRAMPDExitDRAMB2BCASDelayDisabled[Auto]ESCExit	DRAM tRAS		and the second second			
DRAMtWTR6[Auto]DRAMtRRD5[Auto]DRAMtRTP4[Auto]DRAMtFAW24[Auto]DRAMCHARTL42[Auto]DRAMCHBRTL43[Auto]DRAMCHBRTL43[Auto]DRAMCHBRTL8[Auto]DRAMtWL8[Auto]+-Change OptionF1General HelpDRAMRttWrDisabled[Auto]DRAMRttWrDisabled[Auto]DRAMPDExit ModeSlowIAuto]F10Save and ExitDRAMB2BCASDelayDisabled[Auto]ESCEXITSolayStabledDRAMB2BDisabledDRAMB2BCASDRAMB2BDRAMB2BDRAMDisabledDRAMB2BDRAMSolayDRAMB2BDRAMSolayDRAMB2BDRAMSolayDRAMB2BDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolayDRAMSolay<	DRAM tRFC					
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DRAM tRTP 4 [Auto] DRAM tFAW 24 [Auto] DRAM CHA RTL 42 [Auto] DRAM CHB RTL 43 [Auto] DRAM CHB RTL 43 [Auto] DRAM CHB RTL 8 [Auto] DRAM CHB RTL 8 [Auto] DRAM tWL 8 [Auto] DRAM RttNom 60 [Auto] DRAM RttWr Disabled [Auto] DRAM PD Exit Mode Slow [Auto] DRAM B2B CAS Delay Disabled [Auto]	and the second sec		and the second second second			
DRAM tFAW 24 [Auto] DRAM CHA RTL 42 [Auto] ↔ Select Screen DRAM CHB RTL 43 [Auto] 14 Select Item DRAM tWL 8 [Auto] +- Change Option DRAM RttNom 60 [Auto] F1 General Help DRAM RttWr Disabled [Auto] F9 Load Defaults DRAM PD Exit Mode Slow [Auto] F10 Save and Exit DRAM B2B CAS Delay Disabled [Auto] ESC Exit						
DRAM CHA RTL42[Auto]↔Select ScreenDRAM CHB RTL43[Auto]14Select ItemDRAM tWL8[Auto]+-Change OptionDRAM RttNom60[Auto]F1General HelpDRAM RttWrDisabled[Auto]F9Load DefaultsDRAM PD Exit ModeSlow[Auto]F10Save and ExitDRAM B2B CAS DelayDisabled[Auto]ESCExit	The second se					
DRAM CHB RTL43[Auto]14Select ItemDRAM tWL8[Auto]+-Change OptionDRAM RttNom60[Auto]F1General HelpDRAM RttWrDisabled[Auto]F9Load DefaultsDRAM PD Exit ModeSlow[Auto]F10Save and ExitDRAM B2B CAS DelayDisabled[Auto]ESCExit						Select Screen
DRAM tWLB[Auto]+-Change OptionDRAM RttNom60[Auto]F1General HelpDRAM RttWrDisabled[Auto]F9Load DefaultsDRAM PD Exit ModeSlow[Auto]F10Save and ExitDRAM B2B CAS DelayDisabled[Auto]ESCExit	TELEVISION OF THE OWNERS				1000	
DRAM RttNom60[Auto]F1General HelpDRAM RttWrDisabled[Auto]F9Load DefaultsDRAM PD Exit ModeSlow[Auto]F10Save and ExitDRAM B2B CAS DelayDisabled[Auto]ESCExit	DRAM TWL		and the second se		1000	
DRAM RttWrDisabled[Auto]F9LoadDefaultsDRAM PD Exit ModeSlow[Auto]F10Save and ExitDRAM B2B CAS DelayDisabled[Auto]ESCExit	DRAM RttNom		and an		F1	
DRAM B2B CAS Delay Disabled [Auto] ESC Exit	DRAM RttWr	Disabled	[Auto]		F9	
MANAGE MENT AND A CARE STRATEGICS AND A CARE	DRAM PD Exit Mode					
DRAM Command Rate [1] Step 2	DRAM B2B CAS Delay	Disabled	and the second se		ESC	Exit
	DRAM Command Rate		[1]	Step 2		

7. Save BIOS changes [F10] and exit

OC Tweat		Chipset Sett	25	
RAM Tining Cont	trol			ifies the CAS
RAM LCL	7	(8)	Late	ency Time.
RAM tRCD	9	[9]		
RAM tRP	7	[8]		
	24	[27]		
RAM tRAS				
RAM tRFC				
RAM TREC		tion change	and avit cotu	2
RAM tRFC RAM tWR RAM tWTR		rtion change	s and exit setup	p?
RAM TREC		ition change	and exit setu	p?
RAM tRFC RAM tWR RAM tWTR RAM tRRD		ition change	and exit setuj [Cance]]	-
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRTP RAM tFAW RAM CHA RTL	Save configura		[Cance1]	lect Screen
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRRD RAM tFAW RAM CHA RTL RAM CHB RTL	Save configura	[Auto]	[Cance]]	lect Screen Select Item
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRTP RAM tFAW RAM CHA RTL RAM CHB RTL RAM tWL	Save configura	LAuto} [Auto]	[Cance 1]	lect Screen Select Item Change Option
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRTP RAM tFAW RAM CHA RTL RAM CHB RTL RAM tWL RAM RttNom	Save configura	lAuto) [Auto] [Auto]	[Cance 1] 13 +- F1	Dect Screen Select Item Change Option General Help
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRRD RAM tFAW RAM CHA RTL RAM CHA RTL RAM CHB RTL RAM tWL RAM RttNom RAM RttWr	Save configura COX 43 8 60 Disabled	[Auto] [Auto] [Auto] [Auto]	[Cance]] 14 14 14 14 14 14 15 15 15 15 15 15 15 15 15 15	Dect Screen Select Item Change Option General Help Load Defaults
RAM tRFC RAM tWR RAM tWTR RAM tRRD RAM tRTP RAM tFAW RAM CHA RTL RAM CHB RTL RAM tWL RAM RttNom	Save configura (Ok) 43 8 60 Disabled le Slow	[Auto] [Auto] [Auto] [Auto] [Auto]	[Cance 1] 13 +- F1	Dect Screen Select Item Change Option General Help

Ps: after reboot , check if the new setup have been updated.

<mark>dain OC Tueak</mark>		IOS SETUP UTILITY H/W Monitor	Boot	Security	Exit
System Overview				ENTERI .	
System Tine System Date		[02:12:37] [Thu 08/12/2010]	sel	lect a fiel	d.
BIOS Version Processor Type		e (TM) 17 CPU		figure sys	Contraction of the second s
Processor Speed Microcode Update Cache Size	: 2787MHz : 106E5/3				
	: 4096M8 Dual-Channel : None	Memory Mode	++ 14 +-	Select Select Change	Item
DDR3_B2	: 2048M8/984MHz : None : 2048M8/984MHz		Tal F1 F9	Select General Load De	Field Help faults
			F10 ESC		d Exit

Test result?

We use the strictest stress testing , multi-core MemTest in

window 7 [,] to show you PRINCO DDR3-1800 potential.

(Data rate : 983.9*2=1967 , timing : 8, 9, 8, 27 , multi-core test => pass!)

🕉 [O Errors] MemTest 📃 🗖 🗙	💊 [0 Errors] MemTest 📃 🗖 🗙	Z CPU-Z	Z CPU-Z
Enter megabytes of RAM to test	Enter megabytes of RAM to test	CPU Caches Mainboard Memory SPD Graphics About	CPU Caches Mainboard Memo
430	430	Processor	Motherboard
450	1430	Name Intel Core i7 875K Code Name Lynnfield Brand ID (intel)	Manufacturer ASRock
Start Testing Stop Testing	Start Testing Stop Testing		Model P55 Pro/USB3
	About MemTest	Package Socket 1156 LGA CORE inside	Chipset Intel
About MemTest	About MemTest	Specification Intel(R) Core(TM) i7 CPU K 875 @ 2.93GHz	Southbridge Intel
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO	Family 6 Model E Stepping 5	LPCIO Nuvoton
(\$5) or Deluxe (\$14) versions, which	(\$5) or Deluxe (\$14) versions, which	Ext. Family 6 Ext. Model 1E Revision B1	BIOS
add additional features.	add additional features.	Instructions MMX, SSE (1, 2, 3, 3S, 4.1, 4.2), EM64T, VT-x	Brand American Megatrend
[/] 117.9% Coverage, 0 Errors	[1] 122.7% Coverage, 0 Errors	Clocks (Core #0)	Version P1.20
[0 Errors] MemTest	💸 [O Errors] MemTest 📃 🗆 🗙	Core Speed 2787.9 MHz L1 Data 4 x 32 KBytes 8-way	Date 08/12/2010
Enter megabytes of RAM to test	Enter megabytes of RAM to test	Multiplier x 17.0 L1 Inst. 4 x 32 KBytes 4-way	Graphic Interface
	67.945	Bus Speed 164.0 MHz Level 2 4 x 256 KBytes 8-way QPI Link 2951.9 MHz Level 3 8 MBytes 16-way	Version Link Width x16
430	430	Cereio ombytes forway	Link Width ×16 Side Band
Start Testing Stop Testing	Start Testing Stop Testing	Selection Processor #1 - Cores 4 Threads 8	Side Barra 1
About MemTest	About MemTest	CPU-Z Version 1.56 Validate OK	CPU-Z Version 1.56
If you find the free version useful, please considering numbering the PRO	If you find the free version useful,	Z CPU-Z	Z CPU-Z
please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which add additional features.	please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which add additional features.	CPU Caches Mainboard Memory SPD Graphics About	CPU Caches Mainboard Memo
		General	- Memory Slot Selection
[/] 118.6% Coverage, 0 Errors	[V] 119.9% Coverage, 0 Errors	Type DDR3 Channels # Dual	Slot #1 DDR3
💊 [O Errors] MemTest 📃 🗖 🗙	😽 [O Errors] MemTest 📃 🗖 🗙	Size 4096 MBytes DC Mode.	Module Size 2048 MBy
Enter megabytes of RAM to test	Enter megabytes of RAM to test	NB Frequency 2951.8 MHz	Max Bandwidth PC3-10700 (66
430	430	- Timings	Manufacturer
1400	430	DRAM Frequency 983.9 MHz	Part Number PRINCO-DR3-1
Start Testing Stop Testing	Start Testing Stop Testing	FSB:DRAM 2:12 CAS# Latency (CL) 8.0 clocks	Serial Number
About MemTest	About MemTest	CAS# Latency (CL) 8.0 clocks RAS# to CAS# Delay (tRCD) 9 clocks	Timings Table JEDEC #3 J
	About Mem lest	RAS# Precharge (tRP) 8 clocks	Frequency 609 MHz 6
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO	Cycle Time (tRAS) 27 clocks	CAS# Latency 8.0
(\$5) or Deluxe (\$14) versions, which add additional features.	(\$5) or Deluxe (\$14) versions, which	Row Refresh Cycle Time (tRFC) 98 clocks	RAS# to CAS# 8 RAS# Precharge 8
	add additional features.	Command Rate (CR)	tRAS 22
[V] 119.0% Coverage, 0 Errors	[/] 116.6% Coverage, 0 Errors	DRAM Idle Timer Total CAS# (IRDRAM)	tRC 30
😽 [O Errors] MomTest 📃 🗖 🗙	😻 [O Errors] MemTest 📃 🔲 🗙	Row To Column (tRCD)	Command Rate
Enter megabytes of RAM to test	Enter megabytes of RAM to test		Voltage 1.50 V
	All unused RAM	CPU-Z Version 1.56 Validate OK	CPU-Z Version 1.56
430	All brossoskalvi	Windows 工作管理員	0/01
Start Testing Stop Testing	Start Testing Stop Testing	檔案(F) 選項(O) 檢視(V) 說明(E)	
About MemTest	About MemTest		
		應用程式 處理程序 服務 效能 網路功能 使用者	
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO	CPU 使用率 — CPU 使用率記錄 — — — — — — — — — — — — — — — — — — —	
(\$5) or Deluxe (\$14) versions, which add additional features.	please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which add additional features.		
	and the second		
[/] 118.8% Coverage, 0 Errors	[/] 110.0% Coverage, 0 Errors		الاكلامار ومقعمهم علدهم
		「記憶體」 一百體記憶體使用記錄	
		275 (42)	

Part III : Advance test

If you set parameter in BIOS as below,

Overclock Mode: [manual] BCLK frequency(Mhz): [171] CPU Ratio Setting: [17]

DRAM Frequency : [1026Mhz DDR3_2052]

CPU Voltage : [Auto]

VTT Voltage : [Auto]

DRAM Voltage : [1.643V]

DRAM timing : 9, 9, 9, 27

you can check next page

(Data rate : 1028*2=2056 , timing : 9, 9, 9, 27 , multi-core test =>

pass!)

🔧 [0 Errors] MemTest 📃 🗆 🗙	💊 [0 Errors] Mem Test 💶 🗖 🗙	Z CPU-Z	Z CPU-Z
Enter megabytes of RAM to test	Enter megabytes of RAM to test	CPU Caches Mainboard Memory SPD Graphics About	CPU Caches Mainboard Memo
430	430	Processor Name Intel Core i7 875K	- Motherboard
Charter Charter	Construction I Care Tracks 1	Code Name Lynnfield Brand ID	Manufacturer ASRock Model P55 Pro/USB3
Start Testing Stop Testing	Start Testing Stop Testing	Package Socket 1156 LGA CORE	Chipset Intel
About MemTest	About MemTest	Technology 45 nm Core Voltage 1.000 V inside	Southbridge Intel
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO	Specification Intel(R) Core(TM) 17 CPU K 875 @ 2.93GHz Family 6 Model E Stepping 5	LPCIO Nuvoton
(\$5) or Deluxe (\$14) versions, which add additional features.	(\$5) or Deluxe (\$14) versions, which add additional features.	Family 6 Model E Stepping 5 Ext. Family 6 Ext. Model 1E Revision B1	BIOS
[V] 127.2% Coverage, 0 Errors		Instructions MMX, SSE (1, 2, 3, 3S, 4.1, 4.2), EM64T, VT-x	Brand American Megatrend
	[/] 125.1% Coverage, 0 Errors	Clocks (Core #0)	Version P1.20
🍋 [U Errors] MemTest 📃 🗆 🗙	and the second	Core Speed 2912.7 MHz L1 Data 4 x 32 KBytes 8-way	Date 08/12/2010
Enter megabytes of RAM to test	Enter megabytes of RAM to test	Multiplier x 17.0 L1 Inst. 4 x 32 KBytes 4-way Bus Speed 171.3 MHz Level 2 4 x 256 KBytes 8-way	Graphic Interface
430	430	QPI Link 3084.0 MHz Level 3 8 MBytes 16-way	Link Width x16
	Construction Construction		Side Band
Start Testing Stop Testing	Start Testing Stop Testing	Selection Processor #1 _ Cores 4 Threads 8	
About MemTest	About MemTest	CPU-Z Version 1.56 Validate OK	CPU-Z Version 1.56
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO		
please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which add additional features.	(\$5) or Deluxe (\$14) versions, which add additional features.	Z CPU-Z	Z CPU-Z
[V] 124.0% Coverage, 0 Errors	[V] 128.5% Coverage, 0 Errors	CPU Caches Mainboard Memory SPD Graphics About General	CPU Caches Mainboard Memo
	-	Type DDR3 Channels # Dual	Slot #1 DDR3
CEnter megabytes of RAM to test		Size 4096 MBytes DC Mode	Module Size 2048 MBy
	Enter megabytes of RAM to test	NB Frequency 3084.0 MHz	Max Bandwidth PC3-10700 (66
430	430	Timings DRAM Frequency 1028.0 MHz	Manufacturer Part Number PRINCO-DR3-1
Start Testing Stop Testing	Start Testing Stop Testing	DRAM Frequency 1028.0 MHz FSB:DRAM 2:12	Serial Number
About MemTest	About MemTest	CAS# Latency (CL) 9.0 clocks	Timings Table
		RAS# to CAS# Delay (tRCD) 9 clocks RAS# Precharge (tRP) 9 clocks	JEDEC #3 JI Frequency 609 MHz 6
If you find the free version useful, please considering purchasing the PRO	If you find the free version useful, please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which	RAS# Precharge (tRP) 9 clocks Cycle Time (tRAS) 27 clocks	CAS# Latency 8.0
(\$5) or Deluxe (\$14) versions, which add additional features.	(\$5) or Deluxe (\$14) versions, which add additional features.	Row Refresh Cycle Time (tRFC) 98 clocks	RAS# to CAS# 8
[N] 126.8% Coverage, 0 Errors	[/] 126.3% Coverage, 0 Errors	Command Rate (CR)	RAS# Precharge 8 tRAS 22
	🔨 [0 Errors] MemTest 💶 🗖 🗙	DRAM Idle Timer	tRC 30
C Errors] Mena Test Enter megabytes of RAM to test	Enter megabytes of RAM to test	Row To Column (IRCD)	Command Rate
			Voltage 1.50 V
430	All unused RAM	CPU-Z Version 1.56 Validate OK	CPU-Z Version 1.56
Start Testing Stop Testing	Start Testing Stop Testing	P Windows 工作管理員	
About MemTest	About MemTest	檔案(F) 選項(O) 檢視(Y) 說明(H)	
If you find the free version useful,	If you find the free version useful,	應用程式 處理程序 服務 效能 網路功能 使用者	
please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which	please considering purchasing the PRO (\$5) or Deluxe (\$14) versions, which	「CPU 使用率 CPU 使用率記錄	
add additional features.	add additional features.		
[v] 125.0% Coverage, 0 Errors	[1] 111.6% Coverage, 0 Errors		
		記憶體 實體記憶體使用記錄	